

CLAIMS

We claim:

1. An oil well capsule to reduce and prevent asphaltene and paraffin accumulations in pressure differential oil wells, comprising:

5 a shell; and

 a chemically active mass consisting essentially of one or more alkaline or alkaline earth metals encapsulated within said shell, wherein said shell is consumed by the reaction of said chemically active mass with water.

2. The oil well capsule of claim 1, further comprising a coating of paraffin on said
10 shell for insulation.

3. The oil well capsule of claims 1, wherein a weight increaser additive is included in the chemically active mass so that the resulting capsule density is more than one gram per centimeter cubed.

4. The oil well capsule of claim 1, wherein said shell is aluminum foil.

- 15 5. The oil well capsule of claim 4, wherein the inside of the shell has a coating of bitumen.

6. An oil well capsule to reduce asphaltene and paraffin accumulations in pressure differential oil wells, comprising:

 a shell;

20 a chemically active mass consisting essentially of one or more alkaline or alkaline earth metals encapsulated within said shell; and

a gel precursor disposed within a hollowed core of said chemically active mass wherein said gel precursor consists essentially of a powdered metal selected from the group of aluminum and scandium.

7. The oil well capsule of claims 6, further comprising a coating of paraffin on said shell for insulation.

8. The oil well capsule of claims 6, wherein a weight increaser additive is included in the chemically active mass so that the resulting capsule density is more than one gram per centimeter cubed.

9. The oil well capsule of claim 6, wherein said shell is aluminum foil.

10. The oil well capsule of claim 9, wherein the inside of the shell has a coating of bitumen.

11. An oil well capsule to reduce asphaltene and paraffin accumulations in pressure differential oil wells, comprising:

an aluminum foil shell;

a chemically active mass consisting essentially of alkaline or alkaline earth metal encapsulated within said shell; and

a gel precursor chosen from the group of aluminum and scandium disposed within a hollowed core of said chemically active mass.

12. The oil well capsule of claims 11, wherein a weight increaser additive is included in the chemically active mass so that the resulting capsule density is more than one gram per centimeter cubed.

13. A method of reducing and preventing asphaltene and paraffin accumulations in pressure differential oil wells, comprising the steps of:

enclosing a chemically active mass in a shell wherein said chemically active mass consists essentially of alkaline or alkaline earth metal, and wherein said shell is consumed by the reaction of said chemically active mass with water;

5 opening one end of said shell to expose the chemically active mass;

 placing said shell into a pressure differential well, wherein the chemically active mass exposed by the opening of said shell reacts to the water in said well;

 releasing said shell; and

10 consuming paraffin and asphaltene accumulations in said well through the heat generated by the reaction of said chemically active mass with the water in said well.